1	DRAFT #7 - Nuclear Decommissioning Citizens Advisory Panel - DRAFT #7				
2	2018 Annual Report to the Governor of Vermont and the				
3	Energy Committees of the General Assembly				
4	(House Energy & Technology, House Commerce &				
5	Economic Development, House Natural Resources, Fish				
6	and Wildlife, and Senate Natural Resources & Energy				
7	Committees)				
8					
9	I. Statutory Authority and Duties				
10					
11	The nineteen member Nuclear Decommissioning Citizens Advisory Panel (NDCAP) was				
12	established during the 2014 legislative session. For details on membership and duties see				
13	https://legislature.vermont.gov/statutes/fullchapter/18/034. The list of current members of the				
14	Nuclear Decommissioning Citizens Advisory Panel may be found at				
15	http://publicservice.vermont.gov/electric/ndcap (aka, the NDCAP website). Changes in Panel				
16	membership throughout 2018 may be discerned by reviewing the meeting minutes and meeting				
17	recordings available at the NDCAP website.				
18					
19	II. Charter				
20					
21	The NDCAP Charter was adopted on February 25, 2015 and amended on May 26, 2016. The				
22	Charter is available at				
23	https://publicservice.vermont.gov/sites/dps/files/documents/NDCAP/Amended%20ND				
24	CAP%20Charter%20%28Adopted%202016.05.26%29.pdf. No changes to the NDCAP				
25	Charter were made during 2018.				
26					
27	III. Meeting Highlights				
28					
29	The NDCAP held five meetings in 2018; meetings were held in March, May, June, September and				
30	December. All meetings were open to the public and opportunities for comments from the public				
31	were provided. Each meeting included an update on recent activities by both Entergy and the				
32	State of Vermont, as well as ample time for discussion and comments from Panelists and the				
33	public. Educational and issue-specific topics were discussed at most meetings; a summary of each				
34 35	topic is presented below. Many of the meeting discussions centered on the two major Vermont Yankee (VY) decommissioning related activities in 2018, namely the proposed sale of VY to				
36	NorthStar Group Holdings and the transfer of VY's spent nuclear fuel to dry cask storage. The				
30 37	minutes of each meeting can be found on the NDCAP website (a dedicated section of the Public				
38	Service Department website) at http://publicservice.vermont.gov/electric/ndcap. A complete				
39	video recording of each meeting can be found at:				
40	https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisory-panel.				
41	(Links to these video recordings are also available through the NDCAP website).				
_	· · · · · · · · · · · · · · · · · · ·				

March 22, 2018

- **Leadership Selection:** Kate O'Connor was re-elected as Panel Chair. Martin Langeveld was re-elected as Panel Vice Chair.
- Overview of Settlement Agreement and Memorandum of Understanding for Approval of Proposed Sale of Entergy Nuclear Vermont Yankee to NorthStar Group Services Under Consideration in Public Utility Commission Docket 8880:
 Presentations by Mike Twomey (Entergy), Scott State (NorthStar via webcast), two State of Vermont Officials (Steph Hoffman, Public Service Department Special Counsel, and Kyle Landis-Marinello, Assistant Attorney General in the Environmental Protection Division), and Josh Unruh, Chair for the Town of Vernon Selectboard, provided an overview of the Settlement Agreement and the related Memorandum of Understanding (MOU) that was negotiated and agreed to among the majority of parties to the docket. Rich Holschuh, representing the Elnu Abenaki Nation, and Clay Turnbull of New England Coalition provided commentary for their respective parties to the docket regarding the Settlement Agreement and MOU.

Of particular interest to NDCAP, Part 8 of the MOU requires NorthStar to "collaborate with the stakeholders to establish an appropriate public engagement process regarding the decommissioning and restoration of the VY Station site, including exploration of forming a subcommittee of the existing Nuclear Decommissioning Citizens Advisory Panel for this purpose."

The Settlement Agreement and MOU documents are available through the Public Utilities Commission website at https://epuc.vermont.gov/?q=node/64/27332. Copies of these documents are also available through the NDCAP website.

• **Presentation by Waste Control Specialists (WCS)**: A presentation made by Scott State (CEO of NorthStar and WCS) discussed the current capabilities of the WCS radioactive waste disposal facility in Andrews, Texas, its current licenses, and its application to serve as an interim storage facility for spent nuclear fuel and high-level radioactive waste.

May 24, 2018

• Annual Report Discussion & Approval Update on Meeting with Legislators:

NDCAP Member David Andrews provided a brief summary of the Panel's presentation to the Vermont Legislative Committees. The purpose of the Annual Report is to inform the Legislature's Energy Committees of what is going on, ideally early enough in the legislative session such that there is time to take action, if needed, on resources for the Panel. Panel discussion suggested that the 2018 report be completed in September to facilitate this. It was also noted that such Panel resources would need to come through a State Agency budget, most likely that of the Public Service Department, although Natural Resources or Commerce & Community Development were other possibilities. It was further noted that the Annual Report should reflect whether the Panel is being successful in its goals. Having financial resources available would greatly help this.

- State of Vermont Position on Spent Fuel Removal Requirement Outlined in (PUC) Docket 6545: The Panelists held a discussion on the current status of this requirement. (This discussion begins at 52 minutes & 18 seconds into the meeting recording.) The Agreement for this docket (circa 2002) obligates Entergy to "use its commercial best efforts to assure that the spent fuel is removed from the VY site in a reasonable manor, as quickly as possible rather than (have it) stored at the VY site." Entergy is to consult with the Department of Public Service in pursuing this issue. Public Service Commissioner June Tierney noted that while this requirement was still regarded as important, it is not currently a top Department priority. The Department's current focus is on whether the proposed VY sale to NorthStar will be approved. Panelists then discussed options on how they could address the subject of spent fuel in the future.
- **Discussion of Panel Organization Issues:** Several Panelists noted that there are a large number "Panel support tasks" that are being done by a few volunteer Panel members, particularly the Panel Chair (Kate O'Connor). Some of these tasks are supported by the State Nuclear Engineer (Tony Leshinskie). Tasks include generating meeting agendas, preparing meeting minutes, and setting-up and operating the Panel's Public Address System. (A list of tasks was compiled by Kate O'Connor, Chris Campany and the State Nuclear Engineer.) For similar panels meeting in Montpelier, such tasks are handled by departmental resources readily available there. Administrative support for NDCAP uses Public Service Department resources and budget. However, with most Public Service Department staff (other than the State Nuclear Engineer) working primarily in Montpelier, the physical functioning of NDCAP (which typically meets in Brattleboro due to its proximity to Vermont Yankee) relies on contracted staff (e.g. BCTV), the State Nuclear Engineer or volunteers, particularly the Panel Chair. (The Public Service Department receives no additional funding for providing NDCAP administrative support.) The Panel discussed several options to alleviate these administrative issues, noting that these could potentially factor into a reorganization of the Panel prompted by NorthStar's commitment to "collaborate with the stakeholders to establish an appropriate public engagement process" in the CPG Docket 8880 MOU.
- Chair Kate O'Connor indicated that, because of other demands on her time, she would not seek reappointment to NDCAP when her term expires on August 31, 2018. A new Panel Chair will need to be elected and a plan for the Panel's administrative support must be ready to address her departure.
- David Andrews (current IBEW representative on the Panel) noted that he has been volunteering his time to run the PA system for Panel Meetings. He will be moving out of the area later this year, once his job at VY is eliminated. Another means for storing, setting up and running the PA system will be needed. He additionally noted that because of job eliminations at VY, the Legislature may need to change the Panel's enabling legislation regarding a worker's representative on the Panel.

June 28, 2018

- Presentation on the Texas-Vermont Low-Level Radioactive Waste Disposal Compact Commission: Richard Saudek, Vermont Commissioner for the Texas-Vermont Low Level Radioactive Waste Disposal Compact Commission provided an overview of the Low Level Waste Compact Commission, its disposal facility in Andrews County, TX; recent facility activities and the status of the facility operator, Waste Control Specialists.
- Congressional Update on Nuclear Issues on the Federal Level: Haley Pero of Senator Sanders' office, Tom Berry of Senator Leahy's office and George Twigg of Congressman Welch's office provided updates on recent decommissioning-related bills introduced in the US Senate and House of Representatives. (See Section XI for further details on these items.)
- U.S. Department of Energy Update on Spent Fuel Storage and Transportation Activities: Erica Bickford, Transportation Program Manager for the US Department of Energy (DOE), Office of Nuclear Energy and Steve Maheras of Pacific Northwest National Laboratory, subject matter expert on shut down nuclear power plant sites, provided a webcast presentation on the history of DOE spent fuel-related interactions with nuclear power utilities. Prior transportation planning efforts were discussed, as current efforts are on hold awaiting Congressional and Trump Administration direction. The most recent transportation planning studies indicate that approximately seven years will be necessary to implement a national spent fuel transportation policy.
- **Panel Discussion on Spent Fuel:** Panel discussion noted that while there is \$40 billion in the Nuclear Waste Fund (funding for a national nuclear waste repository), there is concern that Congress may never appropriate the money.
- **Update on Panel Activities Moving Forward:** Panel Vice-Chair Martin Langeveld announced that for personal reasons, he would be resigning from the Panel, effective August 30. Citizen Panelist Jim Matteau indicated that, with his term ending in August, he would also be leaving the Panel. David Andrews (VY Workers Representative for the Panel) is also resigning from the Panel, effective September 30. Panel Chair Kate O'Connor noted that a committee has been formed for transitioning the Panel leadership. In accordance with the Vermont Statutes establishing NDCAP, Public Service Commissioner June Tierney will serve as Interim Chair until new Panel Leadership is elected.
- Commissioner Tierney read a Proclamation by Governor Phil Scott thanking Kate O'Connor for her years of service as NDCAP Chair.

September 27, 2018

- Public Service Commissioner June Tierney served as interim Chair for this meeting.
- Entergy Update on Decommissioning Activities at VY: Panelist Corey Daniels, VY Director of Decommissioning, provided an update on recent activities at the VY site. The completion of the Dry Cask Storage Project, reduction of the VY Protected Area, and the anticipated departure of Entergy employees from VY were discussed.
- **Discussion on Panel Logistics Moving Forward:** In an effort to reduce costs associated with individual NDCAP meetings, the Panel made several decisions regarding logistics and practices: "Chatham House" meeting minutes format was

- adopted to limit the effort needed to generate meeting minutes; meeting sites that are less expensive than Brattleboro High School and Middle School will be used, when practical; the Panel agreed to hold meetings on a quarterly basis, unless more are deemed necessary (via Panel Chair determination). It was also agreed that the continued use a PA system for Panel meetings was essential.
- **Election of Panel Leadership**: By Roll Call vote, the candidate slate of Chris Campany for Panel Chair and Lissa Weinmann for Panel Vice-Chair were elected for terms of 1 year.

December 6, 2018

- **Update on Decommissioning Activities at VY:** Joe Lynch, Entergy Senior Manager for Government Affairs, presented an update on recent VY site activities. The US NRC completed several onsite inspections during October and November; no violations were identified by these inspections. An update on the Groundwater Management Program was provided. Planned departures of Entergy employees from the VY site on October 31 and November 29 were reported. An overview of the remaining onsite staff was described. Modifications to the onsite rail spur were outlined. Recent NRC and VT PUC approvals of VY's proposed sale to NorthStar were also noted.
- Review and Comment on Draft Annual Report to Legislature: A draft version (available from the NDCAP website) of the Panel's 2018 Annual Report to the Legislature was discussed. Comments from this discussion were noted for inclusion in the final draft of the Report. Panel members will have opportunity to review the finalized Annual Report in early January 2019. Formal approval of the Report is scheduled for the January 2019 Panel Meeting.
- Panel Observations from November 8 VT Yankee Site Tour: For the benefit of Panelists who were unable to attend, a summary of the November 8 VY site tour was discussed. (See Section IX for further details.)
- Scheduling NDCAP Meetings for early 2019: The Panel agreed to meet on January 24, 2019 (with January 31, 2019 reserved as a snow date) to discuss the PUC's approval of VY's sale to NorthStar and to outline State Agency roles and reporting requirements during VY's active decommissioning. The Panel's second meeting in 2019 was tentatively scheduled for some time in April. Panel meetings for the remainder of 2019 will be scheduled at a future date. At least two more meetings will be held in 2019 to comply with the Legislature's requirements for the Panel.

IV. Major Milestones and Activities at the Vermont Yankee Site

- 1/2 Dry fuel cask loading activities resumed (after holiday & maintenance break)
- 1/8 ISFSI-only site Protected Area construction resumed (after holiday break)
- 1/8 NRC Fourth Quarter 2017 Inspection Exit Meeting no issues, findings, or violations
- 1/9 First dry fuel cask transfer to ISFSI pads in 2018
- 2/13 NRC grants VY Exemption allowing dry fuel cask loading completion by end of 2018
- 3/2 Memorandum of Understanding (MOU) endorsing VY sale to NorthStar signed by all but one party (Conservation Law Foundation) in the Docket 8880 CPG case.
- 3/12 Dry fuel cask loading activities suspended while VY inspects cask components for damage observed at another decommissioning reactor site

211	• 3/30 Final \$2 Million payment to Windham County Economic Development Fund made					
212	•	4/16				
213	•	5/2	Dry fuel cask loading activities resume after no cask component damage found			
214	•	5/14				
215	•	5/21				
216			Application (LTA) filed			
217	•	7/9	NRC Second Quarter 2018 Inspection Exit Meeting – no issues, findings, or violations			
218	•	8/1	Dry fuel cask loading activities completed; all VY spent fuel now in dry casks			
219	•	8/17				
220	•	8/21	VY files formal declaration to NRC that the Spent Fuel Pool is empty			
221	•	8/23	•			
222	•	8/23	ISFSI-only site Protected Area declared operational			
223	•	 10/4 NRC Decommissioning Activities Onsite Inspection Exit Meeting – no issues, 				
224			findings, or violations			
225	• 10/11 NRC approves VY License Transfer Application with conditions consistent with					
226	Docket 8880 CPG case MOU					
227	•	• 10/31 VY staff reduction from 54 to 24 employees				
228	•	 11/19 Refurbishment of onsite rail spur completed 				
229	•	11/20	First NRC "ISFSI Only" Security	Inspection completed - no issues, findings,		
230			or violations			
231	•	• 11/29 VY staff reduction from 24 to 13 employees				
232	•	12/06	VT PUC approves VY License T	ransfer Application and Docket 8880 CPG case MOU		
233						
234	V. Nuc	lear De	commissioning Trust (NDT) a	nd Site Restoration Trust (SRT) Fund Updates		
235	(based on latest available data for 2018).					
236			-			
237			NDT	SRT		
238	\$581.5 M Balance on January 1, 2018			\$30.3 M Balance on January 1, 2018		
239	\$ <mark>51.5</mark> M Qualified Withdrawals					
240	\$21.1 M Market Gains			\$3.2 M Net Gains		
241	\$44.4 M Fund Expenses					
242	\$506.7 M Balance on October 31, 2018			\$33.5 M Balance on October 31, 2018		
243						
244						
245	VI. Transfer of Spent Nuclear Fuel at Vermont Yankee					
246	Transfer of VY's entire spent fuel inventory to dry cask storage was completed on August 1,					

247 2018.

- 24 dry casks were loaded in 2018. A total of 58 casks are now stored at the VY Independent 248
- Spent Fuel Storage Installation (ISFSI). A total of 7 vacant cask spaces remain on the ISFSI pads. 249
- Four of these are required should the arrangement of the casks on the two ISFSI pads need to be 250
- changed for any reason. The remaining three spaces are designated for storage of any Greater 251

252 than Class C Low Level Nuclear Waste (e.g. highly contaminated VY Reactor Vessel and/or Spent

Fuel Pool components) resulting from VY's active decommissioning.

253254255

VII. Reduction of Protected Area Size at Vermont Yankee

- 256 On August 23, acceptance inspections and systems testing for the newly constructed Central
- Alarm Station (CAS) Building, the last step in the ISFSI-only site Protected Area construction
- 258 project, were completed. The CAS Building and its systems were then declared operational. In
- 259 combination with the NRC's final approval to reduce the size of the site Protected Area
- 260 (August 17) and VY's formal declaration that the Spent Fuel Pool no longer contains spent fuel
- 261 (August 21), VY implemented its planned reduction of the site Protected Area.
 - The CAS Building, rather than the VY Control Room, now provides all required monitoring for the VY ISFSI.
 - All emergency communications between VY, State and local Emergency Response
 Organizations and the NRC previously handled by the VY Control Room are now handled
 by the CAS
 - The VY Reactor and Turbine Buildings are now designated as VY's "Site Industrial Area."
 - While controlled access to the Reactor and Turbine Buildings remains in place, it is now less stringent.

269270271

262263

264

265266

267

268

VIII. Status of the Vermont Yankee Sale to NorthStar Group Services

- On October 11, 2018, the US Nuclear Regulatory Commission approved NorthStar's request to
- 273 transfer the NRC license for the Vermont Yankee plant from Entergy to NorthStar, and issued a
- second, separate approval related to use of funds from the nuclear decommissioning trust. The
- NRC license transfer order largely adopted the Memorandum of Understanding approved by
- 276 most Vermont Public Utility Commission Docket #8880 parties on March 2, 2018. The Vermont
- 277 Public Utility Commission approved the sale and issued a Certificate of Public Good on December
- 6, 2018. Final closure on the sale was completed on January 11, 2019.

279 280

IX. NDCAP Tour of Vermont Yankee Site

- On November 8, nine members of Panel toured the Vermont Yankee (VY) site to see firsthand the
- current site conditions, following the complete transfer of all spent fuel to dry cask storage and
- 283 the recent reduction of the VY "Protected Area" to only the dry cask storage pads and the (newly
- 284 constructed) Central Alarm Station Building. Exterior conditions within VY's Industrial Area
- 285 (the former Protected Area that included the Reactor and Turbine Buildings) were also
- observed.
- 287 Corey Daniels, VY's Decommissioning Director and NDCAP member, briefed the other eight
- 288 Panelists on the recently completed spent fuel transfer campaign and VY's overall progress in
- decommissioning since the plant's December 2014 permanent shutdown in December 2014.
- 290 Transitions in onsite staffing and the status of several ongoing activities, including the onsite rail

- spur refurbishment, were also discussed. The staffing discussion noted that several current
- onsite staff, including Mr. Daniels, would become NorthStar employees and remain onsite to
- oversee VY decommissioning activities, should VY's sale to NorthStar be fully executed following
- 294 approval by the PUC.
- 295 Panel members made observations about the VY Site Tour at the December 6, 2018 Panel
- Meeting. This discussion may be reviewed via the meeting's video recording available at:
- 297 https://www.brattleborotv.org/vt-nuclear-decommissioning-citizens-advisorv-panel.

300

301 302

303

304

305

306 307

308

309

310

311

312313

X. Water Management Program at Vermont Yankee

- The rate of groundwater entering the Turbine Building is consistent with rates seen during 2017.
 - Seasonal variations to date produced a rate range between 300 and 800 gallons per day (consistent with 2017 rates)
 - While an End of Year rate of 200 300 gallons per day was expected (consistent with 2017 rates), significantly higher rainfall in late 2018 (vs. 2017), resulted in rates of 500 700 gallons per day at End of Year (621 gallons per day estimated on December 31, 2018)
 - o Over 90% reduction in leakage since 2015 (consistent with 2017 rates)
- A total of 873,000 gallons have been shipped to date
- Roughly 211,000 gallons shipped in 2018
- No discharge into Connecticut River
- Groundwater shipments (to EnergySolutions licensed disposal site in Tennessee) continue on an "as-needed" basis
- Onsite water storage can hold water until NorthStar makes new arrangements for disposal

314315

XI. Vermont Congressional Delegation

316317

- 318 Representatives of Senator Patrick Leahy, Senator Bernie Sanders, and Congressman Peter
- 319 Welch attended multiple NDCAP meetings in 2018.
- 320 At the March 22, 2018 meeting, Haley Pero of Senator Sanders' office reported that, in February, the
- 321 Senator reintroduced the Nuclear Plant Decommissioning Act. Companion legislation was
- introduced in the US House of Representatives by Congressman Welch. The initial version of the
- bill (circa 2012 or 2013), called for a meaningful role for states in reactor decommissioning. The
- revised bill would extend that public input to reactor license transfers. A one-page summary of the
- proposed legislation is available on the NDCAP website (in the "Meeting of March 22, 2018"
- 326 meeting materials section).
- 327 At the June 28, 2018 meeting, representatives from Vermont's entire Congressional Delegation
- discussed several reactor decommissioning-related bills introduced before the US House and
- Senate. Haley Pero of Senator Sanders' office reported that the Senator proposed wording in the
- 2019 appropriations bill which directs the NRC to compile information on the economic,
- environmental, health and safety impacts of power reactor decommissioning. The energy and
- water appropriations bill contains an interim waste storage pilot program provision. Senator

- 333 Sanders and Congressman Welch are two of the co-sponsors for the Stranded Act, which
- 334 compensates communities storing spent fuel providing grants for economic development. The
- status of the NRC's draft decommissioning rulemaking effort was also discussed. 335
- George Twigg of Congressman Welch's office discussed the US House version of the proposed 336
- 337 Stranded Nuclear Waste Accountability Act, which would provide payments to communities
- 338 such as Vernon, VT that store nuclear waste. Such payments could provide roughly \$10 million
- compensation annually to a host community. Congressman Welch voted for HR3053, which 339
- 340 addresses the ongoing Yucca Mountain stalemate. Lastly, Congressman Welch is urging the NRC
- to include state and local stakeholder concerns in its ongoing reactor decommissioning 341
- 342 rulemaking effort.

347

356

358

- 343 Tom Berry of Senator Leahy's office reported that the Senator included language in funding for the
- US Economic Development Administration to report to the Senate Appropriations Committee on its 344
- 345 support for communities going through plant closures.

XII. The Issues Committee of NDCAP

- 348 The Issues Committee, formed in 2015 to make recommendations on topics for discussion at
- 349 NDCAP meetings, met once in 2018. Members of the committee: David Andrews, Chris Campany,
- 350 Martin Langeveld, Jim Matteau, and Kate O'Connor. Panel members David Deen, Derrik Jordan and
- 351 Lissa Weinmann also participated in this Issues Committee meeting. With the departure of the
- 352 majority of Issues Committee members from NDCAP in August and September 2018 (Messrs.
- 353 Andrews, Langeveld, Matteau, and Deen, along with Ms. O'Connor), the Issues Committee is
- currently on hiatus. NDCAP will need to decide in 2019 on whether to reconstitute the Issues 354
- Committee or develop another means for recommending discussion topics at NDCAP meetings. 355

Meeting Schedule and Priorities for 2019

- 357
- 359 should generally meet quarterly, with the understanding that frequency and timing may be
- 360 influenced by the (recently approved) VY Sale Agreement (PUC Docket 8880 Approval Order, CPG

During the Panel's September and December meetings, it was agreed in concept that the Panel

- 361 and MOU), and what these mean for decommissioning and site restoration reporting requirements
- 362 and procedures.
- Consistent with Panel Duties outlined in Part II of the Panel Charter (see Section II of this Report), 363
- the Panel "shall assess further changes to the Panel's membership or duties as appropriate." While 364
- the Panel has yet to discuss such changes, they will need to be considered in 2019 as the impacts of 365
- 366 VY's staffing changes and the VY Sale Agreement become known.